means (16) for transmitting the coded audio signal.

27. (Amended) An encoder (1) which comprises means (16, 20) for coding an audio signal, characterized in that the encoder comprises:

means (7) for examining a part of the audio signal to be coded to find another part of the audio signal which substantially corresponds to the part of the audio signal to be coded,

means (9, 10) for using a set of pitch predictor orders to produce a set of predicted signals on the basis of the substantially corresponding part of the audio signal,

means (12) for determining a coding efficiency for at least one of said predicted signals by using information indicative of said part of the audio signal to be coded, and

means (12, 13, 14) for using the determined coding efficiency to select a coding method for the part of the audio signal to be coded.

REMARKS

Claims 1-39 remain in the application. Claims 1, 21, and 27 have been amended.

A marked-up version of the rewritten claims is attached hereto.

Claims 15, 21, 24, and 27-37 were objected to because they include reference numbers. Applicant respectfully refers The Examiner's attention to MPEP §608.01(m) which states:

> Reference characters corresponding to elements recited in the detailed description and the drawings may be used in conjunction with the recitation of the same element or group of elements in the claims. The reference characters, however, should be enclosed within parentheses so as to avoid confusion with other numbers or characters which may appear in the claims. The use of reference characters is to be considered as having no effect on the scope of the claims.

Applicant respectfully submits that the use of reference numbers in the claims is acceptable.

Claims 1-39 were rejected under 35 USC 102(b) as being anticipated by Matsumoto et al. (US 5,819,212).

Claim 1 is directed to a method for coding an audio signal. The method includes examining a part of the audio signal to be coded to find another part of the audio signal which substantially corresponds to the part of the audio signal to be coded, and producing a set of predicted signals on the basis of the corresponding part of the audio signal using a set of pitch predictor orders.

Significantly, the method includes determining a coding efficiency for at least one of said predicted signals by using information indicative of said part of the audio signal to be coded, and using the determined coding efficiency to select a coding method for the part of the audio signal to be coded.

Thus, Applicant's invention is directed to enabling the coding of any signal at the best possible quality level by selecting the order of a pitch predictor according to the signal. The selection of the pitch predictor order at the encoder is transmitted to the decoder so that the decoder is able to decode the signal correctly. That is, the decoder needs to select the same pitch predictor order for decoding as was used for

encoding. Therefore, the transmitted signal must carry this information from the encoder to the decoder.

Applicant respectfully submits that Matsumoto fails to teach <u>determining a coding efficiency</u> using information indicative of the audio signal. Applicant also submits that Matsumoto et al. fails to disclose using the coding efficiency to select a coding method.

Matsumoto et al. discloses coding a speech signal where the input speech signal is first split in two parts, a low-frequency and a high-frequency part. Each of these parts is then coded by using a different pitch predictor, one for the low frequency part, or band, and another for the high frequency part, or band. The patent discloses using a different pitch predictor on the different parts, or bands, so that the predictor used is best suited to the band to be encoded.

There is simply no disclosure related to determining a coding efficiency of the encoding process. Because Matsumoto et al. fails to determine a coding efficiency, it is impossible for Matsumoto et al. to select a coding method based on coding efficiency.

At least for these reasons, Applicant respectfully submits that Matsumoto et al. fails to anticipate claim 1.
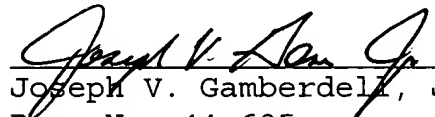
Claims 21 and 27 include similar limitations related to determining a coding efficiency and using the coding efficiency to select a coding method. Therefore, for the same reasons argued in support of claim 1, Applicant respectfully submits that claims 21 and 27 are not anticipated by Matsumoto et al.
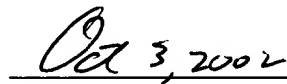
Claims 2-20, 22-26, and 28-39 depend directly or indirectly from claims 1, 21, or 27, and so are patentable over Matsumoto et al.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,

Joseph V. Gamberdell, Jr.
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Oct 3, 2002
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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service on the date indicated below as first class mail in an envelope addressed to the Commissioner of Patents, Washington, D.C. 20231.

Date: 10/3/02

Signature: Denise Spaulding
Person Making Deposit

Application No.: 09/610,461

Marked Up Claim(s)

1. (Amended) A method for coding an audio signal, characterized in that ~~at least~~the method comprises at least the following ~~steps are performed~~:

examining a part of the audio signal to be coded to find another part of the audio signal which substantially corresponds to the part of the audio signal to be coded,

producing a set of predicted signals on the basis of the substantially corresponding part of the audio signal using a set of pitch predictor orders,

determining a coding efficiency for at least one of said predicted signals by using information indicative of said part of the audio signal to be coded, and

using the determined coding efficiency to select a coding method for the part of the audio signal to be coded.

21. (Amended) A data transmission system which comprises means (16, 20) for coding an audio signal, characterized in that the data transmission system also comprises:

    means (7, 8) for examining a part of the audio signal to be coded to find another part of the audio signal which substantially corresponds to the part of the audio signal to be coded,

    means (9, 10) for using a set of pitch predictor orders to produce a set of predicted signals on the basis of the substantially corresponding part of the audio signal,

means (12) for determining a coding efficiency for at least one of said predicted signals by using information indicative of said part of the audio signal to be coded,

means (12, 13, 14) for using the determined coding efficiency to select a coding method for the part of the audio signal to be coded, and

means (16) for transmitting the coded audio signal.

27. (Amended) ~~A~~An encoder (1) which comprises means (16, 20) for coding an audio signal, characterized in that the ~~coder~~encoder comprises:

means (7) for examining a part of the audio signal to be coded to find another part of the audio signal which substantially corresponds to the part of the audio signal to be coded,

means (9, 10) for using a set of pitch predictor orders to produce a set of predicted signals on the basis of the substantially corresponding part of the audio signal,

means (12) for determining a coding efficiency for at least one of said predicted signals by using information indicative of said part of the audio signal to be coded, and

means (12, 13, 14) for using the determined coding efficiency to select a coding method for the part of the audio signal to be coded.